

AMENDMENTS TO THE CLAIMS

This listing of claims replaces all prior versions, and listings, or claims in the application:

1. (Currently amended) A lithographic printing form comprising
 - a) a substrate, and
 - b) a dried and hardened baked aqueous ink comprising a polymer or copolymer with acid groups,
wherein at least one of said groups has been converted to the corresponding amide,
said polymer or copolymer comprising unamidized acid groups,
wherein the substrate and ink comprise the lithographic printing form.
2. (Previously presented) The lithographic printing form of claim 1, wherein the amide is made from an amine selected from the group consisting of ammonia, an alkyl amine and a dialkyl amine.
3. (Canceled).
4. (Previously presented) The lithographic printing form of claim 1, wherein the polymer or copolymer is composed of monomers selected from the group consisting of acrylic acid, methacrylic acid, maleic acid, maleic acid anhydride, fumaric acid, fumaric acid anhydride, styrene, sulfonate styrene, and vinyl.
5. (Previously presented) The lithographic printing form of claim 1, wherein the polymer or copolymer has an average molar mass greater than 250 g/mole.
6. (Previously presented) The lithographic printing form of claim 1, wherein the ink further comprises at least one component selected from the group consisting of
 - a) from 0.1 % to 20 % by weight of a surfactant,
 - b) from 0.1 % to 20 % by weight of a coloring agent,

- c) from 0.001 % by weight to saturation of one or more fatty acids, oils or alcohols,
- d) from 0.001 % to 10 % by weight of at least one transition metal or transition metal complex,
- e) from 0.1 % to 80 % by weight of a surface tension/viscosity modifying agent,
- f) from 0.01 % to 20 % by weight of a hydrophilic additive, and
- g) from 5 % to 90 % by weight of water.

7. (Previously presented) The lithographic printing form of claim 6, wherein said transition metal or transition metal complex is selected from the group consisting of chromium, titanium, iron, molybdenum, manganese, cobalt, zirconium, vanadium and complexes thereof.

8. (Previously presented) The lithographic printing form of claim 1, wherein the substrate is an aluminum plate.

9. (Currently amended) A method of preparing a lithographic printing form comprising the steps of:

- a) treating a substrate with an aqueous ink comprising a polymer or copolymer with acid groups wherein at least one of said acid groups has been converted to the corresponding amide, said polymer or copolymer comprising unamidized acid groups; and
- b) drying the substrate, wherein the ink becomes dried and hardened,
wherein the substrate and ink comprise the lithographic printing form, and
- c) baking the ink into the substrate, wherein the ink becomes dried and hardened.

10. (Previously presented) The method of claim 9, wherein the amide is made from an amine selected from the group consisting of ammonia, an alkyl amine and a dialkyl amine.

11. (Previously presented) The method of claim 9, wherein the polymer or copolymer is composed of monomers selected from the group consisting of acrylic acid, methacrylic acid, maleic acid, maleic acid anhydride, fumaric acid, fumaric acid anhydride, styrene, sulfonate styrene, and vinyl.

12. (Previously presented) The method of claim 9, wherein the polymer or copolymer has an average molar mass greater than 250 g/mole.

13. (Previously presented) The method of claim 9, wherein the ink further comprises at least one component selected from the group consisting of

- a) from 0.1 % to 20 % by weight of a surfactant,
- b) from 0.1 % to 20 % by weight of a coloring agent,
- c) from 0.001 % by weight to saturation of one or more fatty acids, oils or alcohols,
- d) from 0.001 % to 10 % by weight of at least one transition metal or transition metal complex,
- e) from 0.1 % to 80 % by weight of a surface tension/viscosity modifying agent,
- f) from 0.01 % to 20 % by weight of a hydrophilic additive, and
- g) from 5 % to 90 % by weight of water.

14. (Previously presented) The method of claim 13, wherein said transition metal or transition metal complex is selected from the group consisting of chromium, titanium, iron, molybdenum, manganese, cobalt, zirconium, vanadium and complexes thereof.

15. (Previously presented) The method of claim 37, wherein the substrate is heated to above 150 °C.

16. (Previously presented) The method of claim 9, wherein the substrate is an aluminum plate.

17. (Canceled).

18. (Withdrawn) A process for producing an ink for use in the method of claim 9 comprising the steps of:

- a) treating a polymer or a copolymer having acid groups with an amine, and
- b) adjusting the pH to above 7.

19. (Withdrawn) The process of claim 18, wherein the amine is selected from the group consisting of ammonia, an alkyl amine and a dialkyl amine.
20. (Withdrawn) The process of claim 18, wherein the pH is adjusted to between 7.5 and 8.5
21. (Withdrawn) The process of claim 18, wherein the polymer or copolymer is composed of monomers selected from the group consisting of acrylic acid, methacrylic acid, maleic acid, maleic acid anhydride, fumaric acid, fumaric acid anhydride, styrene, sulfonate styrene, and vinyl.
22. (Withdrawn) The process of claim 45, wherein the mixture is heated to between 65 °C and 180 °C.
23. (Withdrawn) The process of claim 42, wherein the fatty acid is selected from the group consisting of lauric acid, myristic acid, palmitic acid, stearic acid, arachidic acid, palmitoleic acid, oleic acid, linoleic acid, linolenic acids, lanoline and lanolinate-alcohols.
24. (Withdrawn) The process of claim 23, wherein the fatty acid is extracted from lanolin or lanolinate-alcohols.
25. (Withdrawn) The process of claim 43, wherein said transition metal or transition metal complex is selected from the group consisting of chromium, titanium, iron, molybdenum, manganese, cobalt, zirconium and vanadium.
26. (Withdrawn) The process of claim 44, wherein the coloring agent is a dye selected from the group consisting of Rhodamine B, Gallocyanine, Methyl green, Sudan IV, Erythrosine B and Crystal Violet.
27. (Withdrawn) An aqueous ink comprising

- a) a polymer or copolymer with acid groups, wherein at least one of said acid groups has been converted to the corresponding amide, and
- b) from 0.001 % by weight to saturation of one or more fatty acids.

28. (Withdrawn) The aqueous ink of claim 27, wherein said fatty acid is extracted from lanolin or derived from hydroxylate lanolin.

29. (Withdrawn) The aqueous ink of claim 48 wherein said transition metal or transition metal complex is selected from the group consisting of chromium, titanium, iron, molybdenum, manganese, cobalt, zirconium and vanadium.

30. (Withdrawn) The aqueous ink of claim 48, wherein said coloring agent is a dye selected from the group consisting of Rhodamine B, Gallocyanine, Methyl green, Sudan IV, Erythrosine B and Crystal Violet.

31. (Withdrawn) The aqueous ink of claim 48, wherein the additive is selected from the group consisting of: ethylene glycol monomethyl ether, ethylene glycol dimethyl ether, ethylene glycol monoethyl ether, ethylene glycol diethyl ether, ethylene glycol mono-n-propyl ether, ethylene glycol monoisopropyl ether, ethylene glycol mono-n-butyl ether, ethylene glycol mono-sec-butyl ether, ethylene glycol monoisobutyl ether, ethylene glycol mono-tert-butyl ether, ethylene glycol mono-n-amyl ether, ethylene glycol mono-n-hexyl ether, propylene glycol monomethyl ether, propylene glycol dimethyl ether, propylene glycol monoethyl ether, propylene glycol diethyl ether, propylene glycol mono-n-propyl ether, propylene glycol monoisopropyl ether, propylene glycol mono-n-butyl ether, propylene glycol mono-sec-butyl ether, propylene glycol monoisobutyl ether, propylene glycol mono-tert-butyl ether, diethylene glycol monomethyl ether, diethylene glycol dimethyl ether, diethylene glycol monoethyl ether, diethylene glycol diethyl ether, diethylene glycol mono-n-propyl ether, diethylene glycol mono-isopropyl ether, diethylene glycol mono-n-butyl ether, diethylene glycol mono-sec-butyl ether, diethylene glycol monoisobutyl ether, diethylene glycol mono-tert-butyl ether, dipropylene glycol monomethyl ether, dipropylene glycol monoethyl ether, dipropylene glycol mono-n-propyl ether, dipropylene

glycol mono-n-butyl ether, polyethylene glycol monopropyl ether, polyethylene glycol monobutyl ether, ethylene glycol, propylene glycol, and a C₁-C₆ alcohol.

32. (Withdrawn) The aqueous ink of claim 48, wherein said aqueous ink has a surface tension between 0.01 N/m and 0.10 N/m.

33. (Previously presented) The lithographic printing form of claim 1 wherein the substrate is a metal plate.

34. (Previously presented) The lithographic printing form of claim 5, wherein the polymer or copolymer has an average molar mass greater than 10,000 g/mole.

35. (Previously presented) The lithographic printing form of claim 34, wherein the polymer or copolymer has an average molar mass greater than 14,000 g/mole.

36. (Previously presented) The method of claim 9, wherein the substrate is a metal plate.

37. (Currently amended) The method of claim 9, further comprising after step b) the step of A method of preparing a lithographic printing form comprising the steps of:

a) treating a substrate with an aqueous ink comprising a polymer or copolymer with acid groups wherein at least one of said acid groups has been converted to the corresponding amide, said polymer or copolymer comprising unamidized acid groups;

b) drying the substrate, wherein the ink becomes dried and hardened, wherein the substrate and ink comprise the lithographic printing form, and

c) heating the substrate.

38. (Previously presented) The method of claim 12, wherein the polymer or copolymer has an average molar mass greater than 10,000 g/mole.

39. (Previously presented) The method of claim 38, wherein the polymer or copolymer has an average molar mass greater than 14,000 g/mole.

40. (Previously presented) The method of claim 15, wherein the substrate is heated to a temperature between 170 °C and 220 °C.

41. (Cancelled).

42. (Withdrawn) The method of claim 18, further comprising after step b) the step of c) adding fatty acid, oil or wax.

43. (Withdrawn) The method of claim 18, further comprising after step b) the step of d) adding at least one transition metal or transition metal complex.

44. (Withdrawn) The method of claim 18, further comprising after step b) the step of e) adding a coloring agent.

45. (Withdrawn) The method of claim 18, further comprising after step b) the step of f) heating the ink.

46. (Withdrawn) The process of claim 22, wherein the ink is heated to a temperature between 70 °C and 150 °C.

47. (Withdrawn) The process of claim 46, wherein the ink is heated to a temperature of 80 °C.

48. (Withdrawn) The aqueous ink of claim 27, further comprising at least one component selected from the group consisting of:

- c) from 0.1% to 20% by weight of a surfactant;
- d) from 0.1% to 20% by weight of a coloring agent;
- e) from 0.001% to 10% by weight of at least one transition metal or transition metal complex;
- f) from 0.1% to 80% by weight of a surface tension/viscosity modifying agent; and
- g) from 0.01% to 20% by weight of a hydrophilic additive.

49. (Withdrawn) The aqueous ink of claim 28 wherein the hydroxyleate lanolin is selected from the group consisting of lanoline oil, lanoline acid and lanolate alcohols.

50. (Withdrawn) The aqueous ink of claim 32, wherein said aqueous ink has a surface tension between 0.02 N/m and 0.06 N/m.

51. (Withdrawn) The aqueous ink of claim 50, wherein said aqueous ink has a surface tension between 0.03 N/m and 0.05 N/m.